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The Agriculturist.

A WEEKLY JOURNAL DEVOTED TO LITERATURE, AGRICULTURE, AND NEWS.

ANDREW LIPSETT, Publisher.

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ANDREW ARCHER, Editor.

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Agriculture.

The Time when Hay ought to be Cut.

The editor of the New England Farmer, who is a thorough practical farmer, has been in the habit of cutting his hay earlier than his neighbors and insists on the advantage of early cutting, though he allows that steep or other work and uncertain weather may compel some fields to be left to stand after the hay is in the very best condition.

We believe farmers generally sow too few varieties of grass for hay. Fow sow much but redtop, timothy and clover, and these are sowed together in the same field, and must all be cut at the same time, although there is nearly a full month's difference in the time of ripening between early clover and late redtop. If the clover happens to be heavy, most farmers prefer to cut it when in bloom, but if rather light and thin, it is more often left to decay, while the redtop and timothy are coming to maturity. It is an excellent plan to have several varieties of grass growing together, but we do not like to have them ripening at widely different seasons. Orchard grass and June grass, both among the very best forage plants grown in the country, should not be mixed either with redtop or with timothy, but should always be grown alone or with such grasses only as will mature at about the same time.

It is a great advantage to a farmer about getting his hay along easily to have all the early and late varieties of grasses by themselves, then he can begin early and secure each kind when in the best condition; but if all sorts are grown together, and none are cut until the latest varieties are ripe, the earlier sorts will be nearly spoiled, while all the work of haying will be crowded into a very short period. If this happens to be favorable, one may secure his hay under such circumstances in tolerable condition, so far as the making is concerned, but if, as often happens, the weather is not good for a week or more, just when it seems most needed, then all is spoiled. A few years since, owing to bad weather in July, there was scarcely any good hay cut in all New England. June was a hot, dry month, and those farmers only who were bold enough to cut their grass during that month, had good sweet mows to feed from that year.

Until we learn more of the laws which govern the weather than is known at present, we can never predict with certainty, long beforehand, what the future weather is to be, and our only safe course is, to be prepared for the worst. It is never stormy all the time--there will be some pleasant days, and usually one or more good weeks for making hay every year. Since the last week in May, there has not been a week, and scarcely a day of good hay which has not been improved by helping to fill the hay mows with something valuable for next winter's use.

About five acres of winter rye, sown expressly for hay, were cut in May, and all cured and safely housed before the fifth of June, when the orchard grass and June grass were in full bloom. The corn had not been hoed at that date, but by running the horse hoe between the rows every few days, the weeds were kept in check, so that it was safe to leave it while the haying was pushed along as fast as possible, with such weather as awaited us at that time. Five large two-horse loads were cut just in season to remain out eight days, but being cooked while very green, and re-cooked two or three times on a new spot, it gradually gave up its juices and was made into good hay, with very little sunshine, and without materially injuring the second growth, which was growing at the rate of nearly an inch a day during the time.

Following the June grass and orchard grass came the clover, and then the timothy, and redtop, the latter being grown together and cut while the timothy was in bloom. Too many farmers have yet to learn that grass cut very early is much less injured by storms or showers than that which is already ripe when cut. Green grass is so full of gums and juices that it can absorb no moisture, and rain water rolls from it like dewdrops from a green cabbage leaf, but ripe grass takes in water and holds it much like a sponge or a weather-beaten shingle.

It is very difficult for many farmers to make up their minds to begin their haying until all the grass is fully fit to cut, and then they mourn because the weather is too wet for haying, or so hot and dry that their grass is all drying up. We know that the season is earlier in our locality, and that the grass is more forward than in some other portions of New England, but

everywhere, as a rule, farmers begin their haying a little too late, and finish it long after the crop is in its best condition for cattle food.

We are aware that it is not the time now to urge the early cutting of hay, or will not be by the time these lines reach the reader, but it is always in order to invite farmers to observe closer and think more. Let those who are now sorrowing about over-ripe hay, or bad hay weather, consider where the fault lies and endeavor to plan better next year, and every year in future. If one will grow several varieties of grass, and such as ripen at different seasons, the earlier and later kinds being kept by themselves, and will commence cutting for hay as soon as the earliest varieties begin to show the blossoms, he will have an opportunity to improve all the good hay weather there may be in the early part of the season, and still stand an equal chance with his neighbors to use the late good weather in case the early should prove unfavorable. We must learn to have our haying come when we can attend to it as it should be, and not all in one week. The risk from poor weather in such a case is entirely too great.

Farmers' Vacations.

We take the following excellent article from the New England Farmer:

Farmers, as a class, think too little of vacations. All farmers do not work extremely hard, nor remarkably steady, but there is often too much jogging and plodding on the farm. It would be better to work a little sharper for a few weeks, and then take a week for recreation away from the farm and its cares, than to be ever in the same harness, even if we do not keep the traces constantly stretched. Vacations are becoming decidedly popular among nearly all classes. Once we supposed they belonged only to school and colleges, but judges and lawyers have, for many years, had their vacations between court terms, and the clergy have also gradually come to expect a few weeks of relaxation from pastoral duties during the hot weather of summer. Business people, especially those living in cities, from the senior partner down to the entry clerk, all count upon a vacation as regularly as does the school boy or college student.

We have long felt that most farmers are too single handed. They are too apt to keep the reins in their own hands constantly. Too apt to attempt to do all their work themselves, or if they hire, they employ help who are too unskilled to be trusted, even for a day, out of sight. There are farmers, or men who are classed as such, for they do nothing else, who will lean against a neighbor's fence by the hour together and discuss the weather, criticize other neighbor's doings, or moan over the ravages of squash bugs or cut worms, which they are too lazy to destroy, who need no vacations. They are so "constitutionally tired" that resting doesn't treat them. There is not tension enough in their muscles for relaxation to have any effect. Such men never get a new idea while it is new; they are like the dull school boy, always at the foot of the class; but there are other men, who, like weasels, are seldom caught asleep. They work early and late, in fair weather and in foul. They do their own milking, because they fear the hired men or the boys will not milk clean; they run their own mowing machine, because they have no help intelligent enough to be trusted with it; they hold their own plough, follow the horse hoe, prune their trees, cradle their grain, and, indeed, do all the difficult or nice work of the farm, while the hired man pitches the hay, and performs other work, for which his little skilled training is required. Such men are too often completely tired to their farms, like horses to a loaded cart.

Instead of the farm being managed for the benefit of the farmer, the man and his whole family seem to be run for the good of the farm, or as Thoreau has it, "the farmer is endeavoring to solve the problem of a livelihood by a formula more complicated than the problem itself." Instead of owning his farm, the farm appears to own him. Such men need vacations. They need to visit other farms, to learn, if possible, easier or better methods of farming or of living. They need to attend farmers' conventions and organizations, to gain new ideas--something to broaden and enlarge their views of life. People who always stay at home are sure to see all the dark sides and shadows of their own lives. They need to learn and to realize that storms and droughts, and thunder showers and freshets visit other farms besides their own; that weeds and insects thrive in all degrees of longitude; that flies and dirt accumulate and annoy other households

besides the ones they reside over. In short, they need to learn how other people live.

Could farmers manage so as to be less confined to their farms; could they work more in partnership, as do men in other business, or could they believe it profitable to employ a higher grade of laborers--men whom they could trust alone for a day or a week--or could they earlier train their sons and daughters to have a care and an interest in the affairs of the farm and the household, then they could often find the opportunity for leaving the farm for a short season of recreation and enjoyment, and thus be, in reality, what they have the name of being, the most "independent class of people in the world."

If we ever are tempted to envy the situations of others, it is when we see two or more brothers, or a father and his sons managing a farm in company, each being competent to steer the craft, and keep things moving in the right direction, in the absence of the other. We know of several such cases. One, where three brothers own and work a farm in joint partnership--each being competent to act as the head in the absence of the others. One or two can be away, but one always remains. Hired men are never left to shirk for themselves, nor to take undesired responsibility. Another of a father and two sons each of whom has his regular division of the work when all are at home, but each competent to oversee or perform any or all parts, and each equally interested in the success of the company.

Such is our highest ideal of a trinity exemplified. But most farmers are too much like men walking alone on a treadmill, where, if they jump off, the mill stops.

Let farmers so arrange their business that every member of the family can, at some time during the season, take a vacation without causing serious disturbance in home affairs, and there would be less complaint heard about the dullness of farm life.

Cleansing Trees with Soap.

A carpenter who worked for me some five years ago, first called my attention to the effects of soft soap when applied to the bark of young apple trees. He had a young orchard to which he paid considerable attention. One of his trees was smaller than the rest; looked badly and was full of ants. He supposed (though no doubt erroneously) that the ants were injuring the tree, and determined either to clear them out or kill the tree with soft soap. He put it all over the tree, on the body, limbs, and even on the young growth. In a short time the leaves dropped off, and he thought he had killed it sure enough. But to his surprise it entirely recovered, put on new growth, and grew more vigorously than it ever had before. In a few years it outstripped every other tree in the orchard. He has since been applying soap regularly to all his trees, and finds them all benefited by it. My own experience is of four years' duration, with an orchard of seventy five trees. They are fifteen years old, and average about fifteen feet high, and six inches through the body. I can safely say that they have a more healthy appearance than they had before the soap was applied (they have been scraped with each soaping), and they have passed through two of the most severe winters without the slightest perceptible injury. All the fruit they have borne has been the finest of its kind. For the past two years the Harrison apple trees have not borne so much as they did before, owing I think to the extreme rapidity of their growth, but they will be all the better for it afterward. By examination, I find the bark on some of the fifteen year old trees is nearly as smooth and thin as on the five year olds--all having been cleaned every summer for three years. This brings up the point about trees absorbing nourishment through the bark. Nelson Ritter says that "probably old trees receive no nourishment through the bark, but this has never been proved." Has it ever been clearly shown that young trees receive nourishment through the bark?

The above instance of the carpenter's tree making such a rapid growth after the soap was applied, would seem to point to this conclusion; but this was only a single instance, and might admit of a different interpretation. If it has been unmistakably proved that young trees receive fertilizing matters through the bark, then, I ask, would not the trees continue to do this farther into old age, by keeping the bark clean and thin, instead of neglecting the bark until it becomes thick and protects the trees when they need no protection? The only time that trees ever need protection from winter, in this climate is during the first few years of their

growth, and the bark of a young tree is always thin. How absurd, then, to leave the old rubbish on the older trees for protection, when it only accumulates after the tree is out of danger! Last year I noted the time I took to soap my trees. A man and boy went over the orchard between one o'clock and five in the afternoon--say seven and one-half hours for one man to do ten trees. Counting ten cents an hour as the wages of a man, we have one cent a tree as the cost of the labor. On the seventy five trees there was applied about three gallons of strong soft soap, or about the third of a pint to the tree, mixed with an equal quantity of water. Call it half a pint to the tree, and put it at two cents, and we have three cents a year as the entire cost of soaping a good large apple tree. If the soap is put on regularly, the trees need not be scraped often than once in two years. All who own apple trees may not be experts at making soap, or may not have a sufficient quantity ready made. In either case I would neither make it nor buy it, but use the ordinary potash lye from wood ashes. Dilute it to the proper strength with water. Lye that will just not take the skin off the hand is not too strong for trees.--Country Gentleman.

Timely Feeding.

When an engineer has a heavy train to carry over a hard grade he does not wait until the ascent is commenced before making preparations therefor. On the contrary, he crowds on an extra amount of steam and increases the rate of speed in order that the momentum thus gained may assist in carrying his load over the hill. If this simple precaution were neglected the steam upon the engine would be very severe, the time required for the trip would be prolonged, and expense of the passage would be increased. By a little simple management at the proper time a great deal of good is accomplished and no small amount of evil is avoided.

The farmer, as well as the engine driver, often has to get over steep grades. Skill and judgment will prove as useful and efficient helps in this business as they are to that of the engineer. One of the "hard pulls" comes when there is an extra number of animals to be fed or a marked diminution in the quality of food with which it was supposed they could be supplied. Though the farmer does not during the summer often largely increase the number of animals he keeps, there are times when he finds it for his interest to buy stock at the time of the year. The buying can be done well enough but how shall the new stock be fed? If the pasture were properly stocked before, they will be over-stocked now. The quantity of food produced will not be increased though a large extra supply will be sadly needed. If fodder crops have been sown the probability is that the area was determined by the number of cattle previously owned, and that there was no provision made for an increase. Consequently the food supplies of the pasture and the fodder crops will not bear the proper proportion to the amount of stock which is to be fed.

The same point is reached when from drought, or any similar reason, the quantity of food is diminished and the usual amount of stock is retained. It is impossible for the farmer to tell in advance what the season will be. If he only puts into his pastures the small number of cattle which would thrive through an extremely dry summer he will sustain a great loss if the season proves to be wet. On the other hand, if he attempts to keep all the cattle which could possibly do well in a wet year and the season should prove dry, his stock would suffer severely and he would inevitably be a loser.

The best method of preventing either of these evils seems to be to put in all the cattle which the pasture will keep well in an average season and make a full provision for emergencies by sowing an abundance of the various fodder crops. If the season proves good the surplus fodder can be dried for winter. If the year is unfavorable the crops will pay well by supplying food to be used during the hot weather. In this manner the quantity of food can be readily graduated to wants of the stock.

But as the engine driver not only needs steam to enable him to haul his heavy load over the grade but also needs to use it at the proper moment so the farmer not only needs to keep on hand a large reserve supply of food before the grass in the pasture fails to such an extent as to make the course one of absolute necessity. In this way, and in this alone, he may be able to carry his cattle through a pinch without injury to them or loss to himself. If he has neglected to provide fodder crops, or they have

failed, or proved inadequate as food supplies for the stock on hand, grass from the mowings should be given until the haying season is over. Then hay and meal should be supplied. Cattle cannot be profitable if they are not fed, and the feeding which pays the best is that which is done at just the right time.--Dirigo Rural.

The Habits of the Pig.

A perusal of some recent local reports, in which that despised animal, the pig, has infinite abuse and contumely heaped upon him, as a quadruped of the most vicious and degraded propensities, induces us to say a word or two in favor of the much maligned porker, and to ask that he be as well as animals of better repute, may have fair play. The fact is that the pig has a bad name as an unclean animal, whose habits are essentially and naturally filthy, and who will feed on disgusting food, from which other animals will turn away. He is thus left to revel in the refuse that he is supposed to prefer, and for the most part no pains are taken to teach him better. A little knowledge of his instincts will, however, show that, so far from the pig being naturally an unclean animal, he is naturally the reverse; and this view is strongly borne out by Dr. Ballard in a report which he some time ago presented to the local Government Board on the "Ettavian Nuisances arising in connection with the keeping of Animals."

"When the pig wallows in mire," says Dr. Ballard, "he merely follows an instinct implanted in him, in common with some other pachydermatus cleansing. The mud stands to him in the relation of soap to a human being, but instead of washing it off with water, he allows it to cake and dry upon the skin, and then rubs it all off, mud and cutaneous debris together, upon some sufficiently rough surface. Loose hair and cutaneous scurf irritates him, and he takes his own way of cleansing his skin from them. Cleanse his skin for him and he will rest in contentment, without offending the eyes of his supercilious betters, often less scrupulous in this matter than he is, by his wallowings, scratchings, and scrubbings. It has long been known that a pig thus cleansed with soap and water, not only becomes less objectionable, but grows fat more speedily than if left to cleanse himself in his own way. Similarly as respects his food. Garbage is not the food that the pig selects by preference. In fact, a pig which has been fed for any time upon sweet food will turn away from sour and disgusting food. If left to pick up his living where he can find it, he will eat anything he can find that is fallen, but even then will eat acorns, fallen fruit, or roots in preference to garbage; and human beings in similar straits will eat precisely in the same way." It may be economical, and perhaps even desirable, to convert into pork matters which can in no other way, or in no way more convenient, be made subservient to the subsistence of mankind, and the pig is possibly properly utilized in this manner. Our only desire is to vindicate his character as a cleanly feeder, if only he has the chance of cleanly feeding vouchsafed him.--English Sanitary Record.

How the Young Birds are Hatched.

What more wonderful provision in nature is there than that by which the young bird is vitalized and matured in the egg. As all who have paid any attention to embryology know, the germ of the future bird is placed on one side of the yolk, and that side is always uppermost, being suspended by chalazae or twisted cords in the albumen of the egg.

If you take an egg, and placing it on its side, break out a circular hole in the upper side of the shell you will always find the blastoderm or embryonic shield, as it is called, on the upper side of the yolk looking you in the face, almost like an eye.

The reason that this embryonic shield is always held uppermost is because the parent bird in incubating applies the hot surface of the skin directly to the upper side of the egg, and that the embryo may receive its proper heat and to receive no injury it is suspended in a thick and elastic deposit of albumen.

The parent bird in the period of incubation, knowing by instinct that the eggs in the middle of the nest received more than their proportionate share of her heat, she is often employed in changing the position of the eggs, putting those that were in the middle on the outer edge. Observe now how this very act beautifully carries out another provision of nature; if by chance a bird could impart to her eggs the same degree of heat throughout so that there would be no necessity for changing their position, the young birds would not hatch, because, the heat being

applied to the eggs at one point without change, the veins which are thrown out to the shell to obtain oxygen for the embryos would be over stimulated and strong at that point, and weak and powerless at all other points, where the heat was not employed. The result would be that the chicks would be confined or anchored to one side of the shell, and, as they could not turn around in the shell in order that they might break a circle around it to liberate themselves they would die at the time they should break their prison walls.

Nature thus implants in the parent bird the instinct to keep changing the position of the eggs, in order that the embryos may be born.

Green Peas--Half a Bushel a Day

Is there anybody who does not enjoy well cooked green peas, fresh from the garden--a good pea of them--and very often, too? They are a nourishing food, and healthy too, if well cooked, and not swallowed with the skin or seed-coat unbroken. They are one of the most certain, easily grown and earliest products of the garden, and can be had in succession most of the summer. When our family is large we always plan for "half-a-bushel a day" (in the pod) from some time in May, according to the season, up to the end of July, and often well into August. The ground producing them is used for a second crop--celery or something else. Selecting as dry and warm a spot as can be allotted to them, and applying a fair quantity of well-rotted yard manure, we sow on the same day at least two varieties, in rows, as soon as the snow is gone and the ground can be worked without packing. A good assortment to start with is: a few "improved Daniel O'Rourke's," for the earliest (they are bettered by a little sugar added in cooking); plenty of alphas for the chief early crop, with more of them sown five or six days later, or with "Laxton's Gill basket," or "little gem," or "advancer," sown at first, to come in after the alphas; and champion of England sown plentifully at first, and more sown every week or oftener, to keep up a constant succession. The champion may be varied with the "British queen," and "Vetchies' perfection," if desired. The "tall sugar" can be sown by those wishing peas to be eaten "pods and all." Alphas and champions, sown at first, and in succession, answer very well without other varieties. Sow at the earliest possible day, to have them ready to follow asparagus, if you have it. If by starting too soon the first leaves get nipped by frosts, they will send up more leaves and try it again. If killed outright, put in more seed. Get a good pile of brush all ready now. It can be re-used for the later crops. If brush is not available, firm stakes can be driven along each side of the rows, and two or more wires or even strong twine (tarrif if possible) be stretched to hold up the vines--say two feet high for the alphas, and three feet or more for the champions.--American Agriculturist.

Level Culture.

At the beginning of farm life, in order to learn the most improved methods, I employed a first class farmer and gardener, fresh from England. He persisted in a mode of cultivation precisely the reverse of what I had been used to see--allowing the mangels and sugar beets, the corn, potatoes, peas, beans, cucumbers, melons, tomatoes, cabbages, etc., to go without any hilling up. The mangels and sugar beets stood high above the ground, the bulbous parts exposed to the sun, many of the mangels falling over and growing crooked.--The part of the cucumbers above ground, which I insisted was rather a root than stem, and should be surrounded by earth, was left entirely exposed to the sun. I thought the sun would parch the roots and they would break or be injured when the stem should fall from the upright to a horizontal position.

The Englishman would have his way, but agreed I should treat some of each sort of plants in my own way. So a few of all sorts were hilled up, and fully as well worked in other respects as his during the season. For a few weeks mine grew as well as his, and the cucumbers, peas, etc., bloomed as early. After one gathering of cucumbers, peas, etc., and the dry season set in, mine perished, while his continued to bloom and bear, and so of the melons. My potatoes made about half a crop of small tubers, dug from dry hills; his yielded bountifully of large ones, dug from moist earth, at the same time in the same field. So with the mangels, sugar beets, etc. The hilled peas, beans, fired early in the season, and succumbed to the drought. Without this experience, if one had said that hilling up growing plants would kill

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I should have joined in the response of a million farmers, denouncing it as false and contrary to experience because they did not perish on the day they were hilled up. Ever since I have avoided hilling and ridgeing about growing plants, and cultivated the soil as evenly as possible.--Cor. of American Farmer.

The following is the opinion of Professor S. W. Johnson on this important subject:--

For human food plants are better when matured, but for animal food we find the opposite true. The younger a plant the richer it is for those that are of more recent growth are richer than those parts of older growth. In the growth of plants there is a constant change going on in their chemical properties. This is the key to the understanding of the whole question of the value of plant food, and sheds much light upon the question under discussion. Those plants that have the deep rich green color are more valuable than those of a paler hue. This, of course, depends on the dressing to which the field is treated; then it must have plenty of sunshine and water. The grass that grows on a too dry soil is rich and bushy; that growing on wry, moist land is soft and more nutritious.

It is accurately established that green and dry clover do not differ in their substance, the drying of clover not depriving it of any of its qualities. As it grows old after being cut it loses these good qualities. Hay the second year is not so nutritious as it is the first year, neither is it as good at the close of winter as at the opening when feeding begins.

Many facts tend to show that just previous to blossoming is the time to get a happy medium between quality and quantity. But the time to cut hay depends largely upon what you want to do with it when cut. If you wish to sell it, and you desire bulk and weight, let the hay get very ripe.

MOSS ON GRASS LAWNS.--It is generally thought that a damp, underground bottom is the cause of moss on grass lawns, but by some it is regarded as proceeding in a great measure from poverty of the soil, for where grass grows freely this parasite is rarely if ever found. To effect a riddance of this pest there is nothing equal to fresh slacked lime and wood ashes mixed--so writes a correspondent in Land and Water--which, he states, not only kill it and cause it to shrivel up, but have most beneficial result on the lawn by stimulating the natural herbage. Where this is really poor and needs assistance I would strongly recommend the use of both the above named, together with the addition of soot and finely sifted soil, which mixture is far better than guano, nitrate of soda, or other patent manures, that force too much growth for a time, only to be succeeded by increased exhaustion soon after. The first proceeding, however, to cure a mossy grass path should be to scarify it well over with an iron toothed rake, followed by a good sweeping after with partly wet-up brooms, which will make way for seeds to be sown, and these should be worked in by using the rake as before. This done, the soil mentioned and the ingredients will then come in for affording an additional covering, under which it will germinate, and, once through make rapid progress.

THE GREEN CABBAGE WORM.--Make a strong tea of dog fennel as follows: A fifteen gallon kettle well filled with the stalks, leaves and blossoms of dog fennel, fill up with water, steep three hours over a moderate fire and pour off the tea. You will have ten gallons; give time to cool. Sprinkle this over the cabbage with a brush or old broom some clear morning after the dew goes off. You will have enough for eighty heads, one pint to the head; less will do if your cabbage has not commenced heading. Should the worms reappear, repeat.

Apiarists appear to be in favor of wintering bees in cellars, instead of the old method of leaving them upon the stands where they were kept during the summer. The bees, when protected from severe cold, eat less and come out much stronger in spring. But it is quite important that the cellar in which bees are stored should be perfectly dry and well ventilated, for unless these conditions are secured the combs become moldy and the bees perish.

To rejuvenate old orchards, cut out all the dying wood, and three fourths of the suckers, scrape the trunks of the trees completely, removing all the old, hard, broken bark; wash with a preparation of whale-oil soap and water, a pound of soap to a bucket of water; and give the orchard, not merely under the trees, but every part of it, a heavy top dressing of good barnyard or compost manure. If there is any life or productivity in the trees this will bring it out.

